Age Effects: An Interview With Robert DeKeyser, University of Maryland

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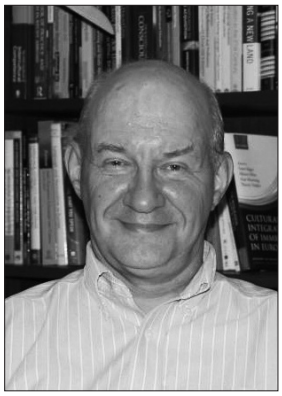

Robert DeKeyser is the author of many articles on age effects and related topics, including, *Age effects in second language learning* (2012).

Daniel Dunkley (DD): Thank you for this interview, Dr. De Keyser. Allow me to begin by asking you a basic question: What is meant by *the critical period*?

Robert DeKeyser (RDK): The term critical period has existed in biology for a long time. It refers to the fact that various species can only learn certain things within a very small window of time. For instance, goslings will only learn that their parents are these particular geese at a very young age, and follow them around. The first person to transfer this to SLA was Eric Lenneberg in the 1960s. In his book, *Biology of Language* (1967), he expressed in my opinion what the critical period really means in a way that a lot of people have not understood or should go back to reading. He says very clearly that the critical period does not mean that you cannot learn a language anymore past a certain age. When you are 20 or 30 or 40 you can still learn a language, but you cannot learn it effortlessly the way children do, without thinking about it, nor are you going to be indistinguishable from a native speaker. So these are two things that distinguish learning before, let's say 12 or 15—we can argue about the exact boundary—from what happens afterwards. After that, you definitely have to think consciously about the patterns you are learning, and you'll always have a bit of an accent and you're always going to make an odd mistake.

DD: This leads us to the idea of implicit and explicit learning.

RDK: Although Lenneberg doesn't use that terminology, implicit versus explicit is what we now use to distinguish learning without thinking about it, versus learning while thinking about what you are learning. So any young child that is learning his or her native language never thinks about the structure; children don't even know there are verbs and nouns, let alone third persons or the past tense. Children absolutely don't know about this until maybe they learn about it in school, but they can already use the forms much earlier. On the other hand, adults are not very good at this kind of learning. They get exposed to a lot of input if they go to a foreign country to live there by just talking to the natives, but not all that much learning happens. Some people spend a lot of time in the country and really don't learn the language. Others do learn the language, but they reflect on the input and they think about the patterns.

DD: There seem to be two different aspects: the speed of learning, and the ultimate attainment.

RDK: That clearly distinguishes children from adults. You can compare them to the story of the hare and the tortoise in the sense that if you keep going steadily like the tortoise while the hare is sleeping, eventually the tortoise will get ahead of the hare. In this comparison, the child is the tortoise and the adult is the hare. The adult progresses fast at the beginning, because the adult can study patterns of language and then use what he or she knows consciously to try to speak. A child can't do that. At the beginning an adult in a language class can learn a lot more than a child can, but at a certain point in time the adult comes to a halt. For some students this is quite early, for others later when they are relatively close to a native speaker. On the other hand, children keep going until they are speaking like native speakers. So children go slowly but surely, while adults go faster but never reach the final point.

DD: What is this final point? Is there an easy definition of SL proficiency?

RDK: Well, there isn't a simple definition, and that's the reason why proficiency testing is so hard. Of course, roughly speaking, having proficiency means being able to communicate in that language well. But when we say "communicate well," that means many different things: there is speaking, listening, reading, and writing, and there's everyday talk versus more technical vocabulary. If we just think about speaking, there is the pronunciation aspect, versus vocabulary versus grammar. Thinking about pronunciation alone, there is the phonetics, the phonology, and within the phonetics there are the segmentals and the supra-segmentals. You can go on and on. There are so many things you need to know at some level to have communicative proficiency, that it's very hard to know what to emphasize. So that's why it's hard to test proficiency, because you always have to do a trade-off.

DD: You have mainly researched immigrants' competence in grammar. Why do you focus on grammar?

RDK: First of all, because it's well established that pronunciation is clearly a function of age of learning. The correlation between the age at which a person starts learning a second language and the accent the person eventually has is so strong that if you have some experience with this you can talk to a non-native speaker for a little while and guess whether that person was 10 or 14 or 16 when they learned the language. On the other hand, it has always been more controversial to what extent the age someone started learning relates to their grammar. There are many reasons for this. It's mainly because grammar is more difficult to test. If you want to know what accent a person has, you talk to that person for a minute and you have an idea, because even in a short sample of speech, all the sounds and sound combinations will typically occur. But for grammar, you have to look carefully for a set of sentences that have all the grammar structures you want to investigate. So that's why the layman thinks that grammar is less affected by age than pronunciation. But when we test people carefully, even with a paper-and-pencil test, and certainly with more sophisticated tests, then we see that there is also a very strong effect of age on grammar.

DD: Your most famous study was of immigrants to the US*. What did you find?

RDK: In that study of Hungarian immigrants who were living in the US—Pennsylvania and Ohio—we looked at people who had been in the country for quite a while. I think the minimum was 10 years, and most had been here for much longer; the average is over 30 years. You can imagine the Hungarians often came to this country in the late 1950s after the Soviet invasion. So, there are a lot of people who are native speakers of Hungarian who have been here a very long time. So, we're looking at ultimate attainment; we're not looking at what they can do after a year or two. With these people we tested grammar, nothing very sophisticated. We see that there's a very strong age effect, in this sense: if they learned the language before age six or so they are like native speakers, at least on this relatively easy test. Very importantly, if they do well on this test after age 18, then they must have high aptitude. The reason for this is if you want to learn the language well as an adult, you must learn it explicitly; you must think about the patterns and you need aptitude for that. So there were only a few people out of 50 or so who had indeed learned the language after age 15 to 17 and still scored within the range of native speakers. But this is firstly because of high aptitude and secondly because the test was fairly easy. So if you make the test much harder, using longer sentences, rare structures, collocations and so on, then even for people with high aptitude you will find a clear age effect. Now, this does not mean that these people speak the language very poorly. From a practical point of view, most of them who have lived here for decades use the language for almost every purpose every day. They are highly fluent, but even after all these years you can tell how old they were when they started learning English in this environment. We have done other research with other groups: with Russian learners of English and Russian learners of Hebrew. In a way, Hebrew is a more interesting language than English because it has a lot of morphology and English has very little. The result came out the same way. There was a clear age effect, and only people with high aptitude still did relatively well as adults.

DD: What are your conclusions about learning English, in Japan for example? Would it be more effective to start learning it at age seven or at age 13?

RDK: So far we've only talked about immigrants. They are exposed to the language all the time. That means that if they are still very young and are implicit learners they will learn the language completely like a native speaker through exposure. If they are adults, even though they get as much exposure, they can no longer do it. Now, from the literature on age effects, many people have inferred "All you need to do is start early." Well no, there is

something missing, because in our conversation we've been talking about two things. One is the age at which you start, and the other one is the ability to learn explicitly. That means children learn implicitly and adults learn explicitly. But in the classroom, it's very difficult to learn implicitly. The reason for this is that typically you only have a few hours a week, and in these few hours you cannot possibly get enough input to do what the tortoise does, slowly progressing toward the point of the native speaker. We need far more time for that, and of course, we need exposure to the right kind of language for the child. When it comes to pronunciation, of course, you need a native teacher. So I'm afraid that people will think if you just start early—at age six instead of 12—then all the problems are solved. That's a big mistake.

DD: Have there been studies of classroom learning at different ages?

RDK: The research we have on this point is mainly from Spain. It shows that if you compare a six-year-old and a 10-year-old in terms of how much English they learn after, say, 400 hours, the older they are, the more they have learned. That's not entirely surprising, because if you did the same thing for math you would find the same thing. A 12-year-old can learn a lot more than a six-year-old. So what that tells us, combining the research not only from immigrants, but also from children in the classroom, is that it's not a matter of having to start early, but a matter of providing appropriate instruction for the learners' age.

DD: What are the main differences between teaching methods for six-year-olds and 12-year-olds?

RDK: If people are adults or adolescents the most effective way to teach them is to help them see the patterns in the language. Not just that of course. They also need a lot of practice, but you can really speed the learning up by making people see the patterns. For younger children that doesn't work very well. On the one hand they are at a disadvantage compared to older people because they cannot learn the grammar and understand it perfectly, but on the other hand, if they get an enormous amount of input for years, then they are very much at an advantage. Now the question is, if you only have a few hours a week of instruction, because that is all you can afford (and that's the case for most people worldwide), then for children of course the best thing to do is to adapt to the child, play games with the child, and then engage the child in communication.

DD: You seem to be pessimistic about early foreign language learning! Is there any advantage in teaching young children?

RDK: Nothing magical will happen, the learning will be somewhat limited, but in one area the child will do better than the adult, even with limited exposure. This is the learning of pronunciation, because that is the most age-sensitive part of all. Now, the problem is that it only works if the teacher provides good input. However, that is, in many countries, the irony of the situation. Often people think that in order to teach a language at an advanced level you need to be a native speaker, but to teach it at the basic level you don't have to be a native speaker. Well, if you don't think of age differences that may be true. But if you think that basic teaching often happens for very young children, and advanced teaching is often for adults, then it's almost the opposite. This is because, given that what children have to learn and can learn very well is pronunciation, that's precisely the time you need a native speaker. Then, once people are really advanced and they learn more sophisticated aspects of grammar and pronunciation, you don't need a native speaker; you need somebody who knows the language well and who knows how to teach it.

DD: Thank you, Dr. DeKeyser, for these thought-provoking ideas on age effects and early foreign language learning.

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